

Notes:

Once a new approach for existing conditions is determined, the existing load and TMDL tables will need to be revised (as well as the response to comments document and many details in the text). In addition, a short write-up on different options evaluated and the selected alternative would be useful. The numbers below correspond to the order of my green highlights in the response to comments document.

I think it would also be useful to add “Instream” to the title of Tables 4-5 through 4-7

1. Various analyses to calculate existing conditions.

See attached spreadsheet: Dryweather_instream_analysis_091907.xls. The first sheet describes 7 different analyses that were performed. Numbers 4 & 6 correspond with Professor Holden’s suggestions based on all possible data (n=25) and numbers 4 & 7 are similar, but focus on the highest sampling stations (n=5). I would be hesitant to use the analyses based on only 5 samples, but they are useful for comparison. We can talk more about the pros/cons of each of these.

2. Flow data by station

Below is the first full paragraph on page 18 with some modifications noted in red font. In case the pagination changed, this paragraph was 3 paragraphs up from Table 4-5. In addition, a new table is provided summarizing all available instream flow data for dry weather. This will be a new Table 4-5, so, unfortunately, all other tables in this chapter will need to be renumbered. Also note that if the method for calculating existing loads changes, we’ll need to do a close read of the document to catch details that may change (such as the last sentence of the following paragraph).

There were five flow measurements collected at station MBW06 (Figure 4-1), the dry weather monitoring station closest to the mouth of Tecolote Creek. These flow measurements ranged from 0.12 cubic feet per second (cfs) to 0.81 cfs and had an average flow rate of 0.36 cfs (Table 4-5). This value is similar to the average dry weather flow for all monitoring stations in the watershed (0.30 cfs based on 25 samples collected at five stations), as indicated in Table 4-5. It was therefore considered representative of the Tecolote Creek dry weather flow and was incorporated into the existing load and TMDL calculations.

Table 4-5. Instream Dry Weather Flow (cfs) Data Summary

	Station					
	MBW06	MBW07	MBW08	MBW09	MBW10	All Stations
Count	5	4	5	5	6	25
Minimum	0.12	0.02	0.02	0.01	0.08	0.01
Maximum	0.81	1.06	0.40	0.59	0.58	1.06
Mean	0.36	0.57	0.17	0.24	0.23	0.30
Median	0.33	0.60	0.09	0.20	0.18	0.24
Standard Deviation	0.28	0.47	0.16	0.24	0.19	0.28

3. Additional information on outlets draining to Tecolote Creek

A map was already included that identifies the locations of the drain. The paragraph below, which is from the last page of Section 4, has been modified to reference this figure (Figure 4-1). The response to comments needs to be modified to indicate that the table was already included & is now referenced. Similar to above, any changes to the above paragraph are in red font. In addition, the original Table 4-9 should be replaced by the three tables below.

To further characterize bacteria densities in Tecolote Creek, data from several storm water outlets (illustrated by the blue triangles in Figure 4-1) were evaluated. Tables 4-10 through 4-12 summarize the TC, FC, and ENT results, respectively, at each station and at all stations combined. These data indicate that the dry weather urban runoff draining into Tecolote Creek and its tributaries frequently exceeds REC-1 numeric WQOs (exceedance frequencies range from 0 to 100 percent, depending on the station and indicator bacteria). In particular, station DW108 (Figure 4-1) has especially high TC concentrations (Table 4-10), while station DW275 (Figure 4-1) has high FC and ENT concentrations (Table 4-11 and Table 4-12). The only stations with zero percent exceedances were DW279 and DW280 (Figure 4-1). Only one dry weather drainage outlet sample was available at each of these stations. A total of five flow measurements were available, distributed among three stations. These flow measurements ranged from 0.04 to 0.56 cfs and had an average flow rate of 0.18 cfs, although this average rate is highly influence by the 0.56 cfs measurement at DW108 (the second highest flow measurement was 0.12 cfs).

Table 4-10. Summary of Total Coliform Data from Outlets Draining to Tecolote Creek (or its tributaries)

	Station					
	DW108	DW109	DW275	DW279	DW280	All Stations
Count	3	3	3	1	1	11
Minimum	3,000	1,300	3,000	8,000	2,300	1,300
Maximum	300,000	70,000	90,000	8,000	2,300	300,000
Mean	147,667	26,100	33,333	8,000	2,300	57,418
Geometric Mean	50,133	8,604	12,364	8,000	2,300	13,534
Standard Deviation	148,648	38,125	49,116	N/A ^b	N/A	93,017
% Exceedance REC-1 target ^a	100%	100%	100%	100%	100%	100%

^a REC-1 dry weather numeric target for total coliform (TC) is 1,000 MPN/100mL.

^b N/A = not applicable. Geometric means could not be calculated because only one sample was available at this station.

Table 4-11. Summary of Fecal Coliform Data from Outlets Draining to Tecolote Creek (or its tributaries)

	Station					
	DW108	DW109	DW275	DW279	DW280	All Stations
Count	3	3	3	1	1	11
Minimum	20	230	1,100	140	40	20
Maximum	50,000	1,700	160,000	140	40	160,000
Mean	19,340	743	54,133	140	40	20,257

	Station					
	DW108	DW109	DW275	DW279	DW280	All Stations
Geometric Mean	2,000	490	6,116	140	40	1,017
Standard Deviation	26,850	829	91,683	N/A ^b	N/A	48,637
% Exceedance REC-1 target ^a	67%	100%	100%	0%	0%	73%

^a REC-1 dry weather numeric target for fecal coliform (FC) is 200 MPN/100mL.

^b N/A = not applicable. Geometric means could not be calculated because only one sample was available at this station.

*Table 4-12. Summary of Enterococcus Data from Outlets
Draining to Tecolote Creek (or its tributaries)*

	Station					
	DW108	DW109	DW275	DW279	DW280	All Stations
Count	3	3	3	1	1	11
Minimum	7,200	480	1,500	80	20	20
Maximum	34,000	10,000	140,000	80	20	140,000
Mean	17,067	4,160	48,767	80	20	19,098
Geometric Mean	13,477	2,125	10,027	80	20	2,608
Standard Deviation	14,731	5,114	79,028	N/A ^b	N/A	41,262
% Exceedance REC-1 target ^a	100%	100%	100%	100%	0%	91%

^a REC-1 dry weather numeric target for *Enterococcus* (ENT) is 33 MPN/100mL.

^b N/A = not applicable. Geometric means could not be calculated because only one sample was available at this station.